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ABSTRACT

Two studies examining student images of the world as depicted on sketch maps are compared. The first study collected sketch maps of the world drawn by high school and university students in the United States, Canada, Finland, and Sierra Leone to examine the influence of location on student perceptions. The second study collected maps drawn by students in grades K-12 in a variety of locations in order to evaluate the age at which students form cognitive maps of the world. While the perspectives of these two studies differed somewhat, many of their findings were similar. The studies indicated that students' images of the world--that is, their knowledge of country names; and their perceptions of country size, shapes, and locations--are influenced by the proximity of places to a student's home, current events, and a variety of cultural factors. (LP)

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TWO COMPARATIVE STUDIES OF STUDENT VIEWS OF THE WORLD

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ABSTRACT

Although one is an horizontal study and the second is vertical, the results of two studies which examine images of the world as they are depicted on sketch maps are compared in this paper. Thomas Saarinen's studies of high school and university student world views (1973) are used as the basis for examining and evaluating the results of a similar study conducted in 1979 with younger participants.

The perspectives of each of the studies differ somewhat. However, many of their results are comparable. Similar components are outlined and possible explanatory factors are presented for the results of both studies. The factors examined include: the role of proximity of places to a participant's home; the sizes and shapes of places (e.g., countries, states, etc.); the relative location of places; the effects of current events; and the importance of varying cultural factors.

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Given an ever-contracting world, within which peoples of various nations are compelled to communicate and work with each other, an understanding of how individuals form an image of their countries, other nations and the world is paramount. If the formation of world concepts can be examined, then methods of enhancing these concepts may be defined. The formation of such world concepts is the topic of this paper.

Each of us has an image of the world, unique and special to us, although mediated by culture and experience. This image helps to guide our behavior, direct our inquiry, and organize our experiences with the world environment. This paper is an investigation of two studies involving questions about people's cognitive images of the world as they are represented on sketch maps. The first was undertaken by Dr. Thomas Saarinen of the University of Arizona in 1973[1]; the second is one I began in 1979.[2]

Both Saarinen and I appreciated the value of sketch maps as a possible key to education for international understanding. Saarinen collected sketch maps of the world drawn by high school students in the United States, Canada, Finland and Sierra Leone. His purpose was to examine the similarities and differences of maps drawn in varying locations. He noted the frequency of kinds of features labelled on the maps. Presenting results both in tabulated form and in composite maps, Saarinen then tried to explain his results based on six characteristics: proximity, size, shape, location, current events and cultural factors

My study, in some form, parallels the work of Saarinen. The angles of examination in the two studies are somewhat different. Whereas Saarinen was comparing sketch maps drawn by students of nearly the same age from differing countries, my study was aimed at learning when people form most of their cognitive maps of the world. In my study, 2255 maps, drawn by kindergarten through senior high school students from a variety of locations, and their accompanying questionnaires were examined to determine the progression of cognitive image formation and to assess possible explanatory factors for the development of cognitive images of the world. Of central concern was the growth in amount and types of information that comprise people s images of the world at increasing grade levels. Analyzed for their content and form, the sketch maps provided valuable data sources as approximations of people's actual cognitive representations of the world.

Most of our study design was similar, although Saarinen's was an horizontal study, and mine was a vertical study. In terms of study design, both Saarinen and I used sketch maps of the world drawn on blank sheets of paper as the basic artifact of our research. Participants in both studies were allowed one half hour to prepare their maps, labelling anything and everything they could in that period of time. Saarinen's aim was to be able to discuss some "broad cultural biases," and it had been my hope that my data would reflect some "broad biases" for each of the grade levels. Both of us chose to discuss our results in terms of group aggregates, rather than individuals. For Saarinen, there were 265 maps to examine; for me, 2255.

Saarinen expected to find "distinctive ethnocentric views" of the

world, whereas I anticipated "greater and grander" sketch maps from the older participants. Our findings did not disappoint us. Saarinen concluded that "there are a number of features common to the world sketch maps of all groups' samples and some unique qualities dependent on the place of origin of the maps."[3] On the other hand, I found that the quantity and variety of items labelled by study participants increased with age level. This increase took the form of a steplike progression with peaks in grades three, six and nine. The average number of items on maps by participants from each grade level are reported on Table 1. The overall average number of items labelled on the maps was 20, ranging from zero through 139.

Saarinen noted that nations were most often listed. His classes consisted of nations; cities; minor political units (states, provinces); continents; oceans and seas (capes, gulfs, straits, and bays); and others (rivers, mountains, deserts, lakes, types of regions, islands and geographical coordinates). Over one half of the items named on his maps were names of countries. My results differ somewhat. (Please refer to Table 2.)

Of the 27 categories within which map items were classified in my study, countries and states of the United States emerged as the major parts of participants' maps. Most frequently listed were countries. However, they comprised only slightly over 30 percent of the total number of things listed. This, of course, is for the entire sample set. The single item listed most often was "Canada," followed by "South America" and "Africa." These three were the only items to be mentioned by at least 50 percent of my study sample. The remaining specific items named

Table 1

Grade	K-1	2	3	4	5	6	7	8	9	10	11	12
Number of maps collected	85	118	83	147	176	464	734	82	77	54	185	40
Average number of items included on maps	7	7	17	15	14	19	18	25	49	31	31	*

Total Number of Maps Collected = 2255

Average Number of Items on Maps = 20

*Small grade 12 sample omitted from the analysis in original study

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Table 2

Frequency with which items in each category were labelled

Bosowski Study(1981)		Saarinen Study(1973)	
Countries	14,070	Nations	4,900
U.S.A. States	12,491	Minor political units	841
Continents	6,141	Continents	467
Oceans	2,326	Oceans, Seas	498
Geodetic Features	1,828	Cities	1,432
Islands	1,442	Other	717
Provinces	1,222		
Cities	731		
Towns	713		
Gulfs, Bays	665		
Other	589		
Seas	568		
Capitals	529		
Macro Regions	378		
General Physical	345		
Notes	322		
Rivers	306		
Lakes	279		
General Cultural	264		
Imaginary Features	244		
Physical Features	205		
Mountains	173		
Micro Regions	130		
Cultural Features	108		
Deserts	35		
Oceanic Features	33		
U.K. Counties	23		

by participants range in variety from oceans and continents to imaginary and geodetic features. In any event, my findings agree, on a general level, with those of Saarinen in this respect: Countries were most frequently labelled.

Whereas close to ten percent of the total items for Saarinen's group were minor political units; nearly 30 percent of my total were composed of the same. Continents and oceans were not tremendously common for Saarinen's group; however, they comprised over 13 percent and 5 percent, respectively, of the total number of items labelled in my study. Perhaps Saarinen did not account for the fewer possible number of oceans(4) and continents(7), in comparison to that of countries (approximately 170 during the time of my study). In any case, Saarinen refers to the "best sketch maps" as not regularly including ocean and continent names; and to the "poorest ones" as containing "little else." Saarinen continues to point out the "predominance of human over physical features." This, too, was demonstrated by my data.

In my study, countries were the most commonly named items on the maps collected, followed by U.S.A. states, continents, oceans, islands, geodetic features and cities. This is logical, for there are numerous country and state names from which to choose. Also, most data, over 87 percent, were collected within the United States. And, because there are so few possible oceans and continents, their listing is further limited. Valuable though this aggregate information may be, further operations were performed on both Saarinen's data and that of my study in order to yield more conclusive results.

Saarinen constructed "composite political maps ... based on the

percentage of the sample which included some mention of each nation."[4] The composite lists I formed differed from those of the former in a number of respects. Saarinen looked only at nations and ranked them in terms of percent of students listing each. My presentations reflected all of the most frequently mentioned categories of items occurring on my sketch map sets. My category list was far more detailed than that used by Saarinen (compare my 27 categories with his 6). I was, therefore, able to prepare composite average map item lists for each grade level, including all of the map items most likely to make up the average map of a participant in any given grade level.

Saarinen suggested six possible explanatory factors for his findings. The first, proximity, assumes that places closest to home would be best known and, therefore, most often labelled. Home is a powerful concept and was shown to be such by the frequency with which participants in both studies listed their home states and countries. Home is also the factor that determines who one's nearest neighbors are. The places adjacent to home were quite often mentioned. Many times, listing neighbors precluded a listing of home, for home was assumed to be defined either by its neighbors or by smaller units within. For instance, a home state might have been listed instead of a home country. The home continent for most participants in my study, North America, was the sixth-ranking of the seven in terms of overall frequency. Neighbors like Canada, Mexico, the Atlantic and Pacific Oceans and South America were often parts of people's world maps.

Saarinen's second explanatory factor refers to shape. He found that nations having distinctive shapes, especially islands, occurred

more frequently than did land-locked countries or countries where many share similar boundaries. In my study, non-nation islands made up over three percent of the total items labelled. Of the countries listed, the island-nations of Japan, Iceland, Ireland, Cuba and New Zealand were among the top 25 listed. Of those nations with unusual shapes; Italy, Chile, Sweden, Norway, Argentina and Greece were among the same 25. Thus, my work would seem to also bear out this explanatory factor.

Third was the size of nations. Saarinen felt that a larger nation was more likely to be mentioned than a smaller one. Both shape and size of nations appeared to play an important role in the number of mentions each place was given in Saarinen's study. The most often listed countries in my findings included seven of the world's largest.

Fourth was the role current events played in shaping the sketch maps received. Although one might expect current episodes to be reflected in maps drawn at any given time, this remains to be proven as neither Saarinen's nor my research design allws for any definite conclusions in this regard. However, recognizing that data for my study was collected during the late spring and early summer of 1979, a number of minor, yet interesting, facts can be noted. On March 28, 1979, the now infamous accident orrurred at Three Mile Island; and on July 11, 1979, fragments of Skylab were plummeting to Earth. "Fantasy Island" and the replays of "Gilligan's Island" were quite popular, as were other network programs in my study area. Although none of these locations were listed with any tremendous frequency, the fact that they were listed on maps at all is probably due to their prominence in the mass media at the time of data collection. One can only wonder at the possible effects current events

had on the inclusion of any and all of the other items found in the two studies.

Fifth, Saarinen suggested the possible import of cultural factors to the drawing of world sketch maps. Whereas his study was set up to examine such relationships, mine was not. With regard to this factor, I have little to add.

Finally, Saarinen mentioned two other possible factors for consideration: map centering and/or spatial preferences. Neither he nor I concentrated on either of these features. However, we both noted similar frequencies with which specific states of the United States were listed. Saarinen noted his top three as Hawaii, Florida and California. My top six were Hawaii, Alaska, California, Colorado, Texas and Florida. Over 37 percent of my study population was from Colorado. Hawaii is made up of an island chain. Florida has a distinctive shape as a peninsula and is an "end" location relative to the rest of the United States. Alaska and Texas are the two largest states of our country. Thus, proximity, shape and size are once again shown to be explanatory factors for the inclusion of the minor political units on sketch maps of the world.

In addition to the factors introduced by Saarinen, I also examined my results in the light of several descriptive characteristics, drawn from questionnaires completed by participants. These included favorite school subjects, favorite book types, hobbies, travel experience and familiarity with maps, globes and map games. These characteristics, however, were not examined by Saarinen and will, therefore, be left for a future work.

As Saarinen concludes his work, he points to the benefits to be

gained from research utilizing sketch maps as tools of study. "Such research could help clarify deficiencies in current geographic education and thus suggest possibilities for development of more sophisticated views of the world."[5]

As new nations are born, so too are images of them. Most recently, Antigua and Barbuda have declared their independence; and Vanuatu, the last true condominium (France/United Kingdom), has become an independent nation. We can now look forward to the emergence of perhaps five or six more new States. I wonder how long it will take for these to appear as parts of the images of the world people hold deep within themselves.

REFERENCES CITED

[1]Thomas F. Saarinen, "Student Views of the World," in Downs and Stea, Image and Environment (Chicago: Aldine Publishing Company, 1973), pp. 148-161.

[2]Elaine F. Bosowski, "The Fromation of Cognitive Images of the World: An Analysis of Sketch Maps." Ph.D. dissertation, University of Colorado, 1981.

[3]Saarinen, p. 160-161.

[4]Ibid., p. 151.

[5]Ibid., p. 161.